

# **STORMWATER USER FEE CREDIT MANUAL**

## **CITY OF ADRIAN, MICHIGAN**

### **1.0 Introduction**

The Adrian City Commission adopted Ordinance No. 74-161 through 74-172, known as the Stormwater Utility Ordinance, on February 6, 2013. This ordinance provides the City with the authorization to establish and collect stormwater user fees calculated proportionate to the necessary cost of providing stormwater system management services to the users of the City's stormwater system. The City is further authorized by Michigan statutes to construct, reconstruct, improve, and extend the stormwater system.

The City of Adrian stormwater management program addresses flooding, erosion and water quality problems throughout the City. Managing stormwater flows is critical for several reasons:

- Excessive stormwater overwhelms storm drainage systems including streams, culverts and storm drain pipes and can cause flooding.
- Stormwater erodes the land, damaging roads, bridges and other infrastructure, and increases the amount of pollutants added to local waterways.

The City of Adrian's stormwater system is a public system, similar to water or sanitary wastewater system, which provides a public benefit and is maintained by the City.

### **2.0 What is a Stormwater User Fee?**

When subdivisions, roads and commercial developments are built or improved in the City of Adrian the City must pay for managing the resulting storm runoff. The City must install catch basins to capture stormwater and storm sewers to convey the stormwater to streams or rivers, ensuring it does not drain into the sanitary wastewater system and create sewer overflows. Furthermore the City must maintain the entire stormwater collection system. The stormwater system is an expensive piece of the City's municipal infrastructure. The City's water and sanitary wastewater systems each have their own dedicated revenue sources derived from water and sanitary wastewater user fees. In like fashion the City has developed a dedicated revenue source, based on a valid user fee structure, to pay for stormwater planning, administration, construction and operation and maintenance.

The sole funding source for the implementation and administration of the stormwater utility is the stormwater user fee which is a fee charged to properties located within the City of Adrian. This fee is proportional to the stormwater leaving each property which is related to the impervious and pervious surface areas of each property as determined by the Intensity of Development (ID) classification of the property and the total square footage of the property. Residential properties (consisting of detached single-family homes up to and including four units) are charged a flat rate. The ID of a property is the impervious area of the property expressed as a percentage of the total area of the property. Each property, with the exception of residential properties charged a flat rate, is placed within an ID Classification based on the property's ID.

Properties that are not billed on the basis of a flat rate are billed based on the following formula:  
ID Classification rate per square foot times the total square footage area of the property.

The ID Classifications are:

1. *Undeveloped.* Real property which is undeveloped and unaltered by buildings, roads, impervious surfaces or other physical improvements which change the hydrology of the property from its natural state.
2. *Light development.* Developed real property, which has impervious surfaces of less than 20 percent of the total square footage area of the property.
3. *Moderate development.* Developed real property, which has impervious surfaces of 20 to 40 percent of the total square footage area of the property.
4. *Heavy development.* Developed real property, which has impervious surfaces of 40 to 70 percent of the total square footage area of the property.
5. *Very heavy development.* Developed real property, which has impervious surfaces of more than 70 percent of the total square footage area of the property.

### **3.0 What is a Stormwater User Fee Credit?**

All property types are eligible for a reduction in their stormwater user fees through stormwater user fee credits.

The stormwater user fee credit is a conditional reduction in the stormwater user fee if a property owner voluntarily takes measures to reduce the stormwater rate or volume flowing from the property to the City of Adrian's stormwater system. The credit can be obtained through:

- Installation and continuing use, operation, and maintenance of an approved physical stormwater best management practice (BMP) that the City of Adrian does not own, maintain, or operate.
- BMP activities that reduce or alleviate the City of Adrian's cost of providing the City's stormwater management program.

This Stormwater User Fee Credit Manual details the policies and procedures applicable to the stormwater user fee credit program.

## **4.0 Credit Policies**

### **4.1 General Policies**

- a) Credit is given to eligible customers only. An eligible customer shall be the legal owner of a property which has the primary legal responsibility for operation and maintenance of a qualifying stormwater BMP located on the same property.
- b) Multiple credits can be given to eligible properties by adding approved credit percentages. The total credit given to any property cannot exceed 75% of the stormwater user fee for that property.
- c) It is the responsibility of the stormwater customer to apply for stormwater user fee credits, and to provide the necessary information with the credit application, as described herein. Questions relating to credits and credit applications should be directed to the Administrator. City staff is not responsible for initiating, performing engineering calculations, or otherwise assisting with the preparation of credit applications. Any engineering calculations, drawings and inspection reports

required by the credit application must be prepared and stamped by a professional engineer, architect or landscape architect licensed in the State of Michigan for this area of expertise as described in the credit application. This application shall include a recent inspection report by an engineer certifying that the system is properly designed and is being maintained.

- d) Credit applications will only be reviewed if they are filled-out completely. If the credit application is not administratively complete or been approved, the credit applicant will receive notice either by electronic mail (if provided) or by U.S. mail.
- e) If credit applications are approved by April 30<sup>th</sup> each year, the credit will appear on the next bill.
- f) The City will, at its discretion, undertake periodic visual inspections of the stormwater BMPs being utilized to obtain a credit. Consequently, an access easement must be granted to the City for credits to be approved. If the stormwater BMP is found to be functional and being properly maintained, the credit will remain in effect. If the BMP facility is not functional or is not being adequately maintained, the credit will be voided on subsequent billing cycles. The Administrator may revoke a credit at any time for non-compliance by providing thirty (30) days written notice of a non-complying condition and intent to revoke the credit to the property owner. If the non-compliance is not cured within the thirty (30) day period, the Administrator shall eliminate the credit. Before a credit is re-instated, the property owner will have to reapply for the credit.
- g) Properties that have been issued stormwater credits will be required to submit compliance statements every three (3) years from the date of credit approval. This statement can be filled out and signed by the property owner or the owner's designee. The Administrator may revoke a credit for failure to submit this compliance statement by providing thirty (30) days written notice of a non-complying condition and intent to revoke the credit to the property owner. If the non-compliance is not cured within the thirty (30) day period, the Administrator shall eliminate the credit. Before a credit is re-instated, the property owner will have to reapply for the credit.
- h) Stormwater user fee credits are available for:
  - a. Residential Property: Flat Rate 50 %
  - b. Non-Residential Storm Water Quantity: 37.5 to 75 %
  - c. Education: 25 %
  - d. Direct Discharge: Maximum of 75 %

Each practice is described in more detail below.

## **4.2 Credit Descriptions**

### **4.2A Residential Property Credit: Flat Reduction of 50 %**

A Residential Flat Rate Water Quantity Reduction Credit of 50 % is available to owners of a property that contains a detached single family home or up to four units. The applicant must show that a City of Adrian-approved stormwater BMP has been effectively implemented on the property. City of Adrian approved residential property stormwater BMPs include:

- Rain Gardens
- On-site Stormwater Storage
- Vegetated Filter Strips

**4.2A1 Rain Gardens:** Rain gardens are landscaped areas built in a depression that are designed to

capture and filter stormwater runoff from a roof or other impervious surface. The plants and soil of the rain garden provide an easy, natural way of reducing the amount of stormwater runoff from individual residential properties. To obtain the Residential Property Credit, the rain garden must meet the following criteria:

- At least 25% of a property's total impervious area (including roof, patio, deck, driveway, etc.) must drain to the rain garden.
- Stormwater overflows from the rain garden must be directed to appropriate outlets to the stormwater system and away from neighboring properties, sidewalks, steep slopes, or retaining walls.
- The rain garden must be sized and constructed in accordance with requirements in Low Impact Development Manual for Michigan

#### **Maintenance Guidelines – Rain Gardens**

- Maintenance guidelines for rain gardens can be found in Low Impact Development Manual for Michigan

**4.2A2 On-site Stormwater Storage:** On-site residential stormwater storage structures can include rain barrels, cisterns or other storage devices. These structures collect and capture stormwater from roofs that would otherwise be drained directly to the stormwater system or streams. On-site stormwater storage structures can be used to water plants, trees, or lawns during dryer periods. To obtain the Residential Property Credit the following criteria must be met:

- 75% of the property's roof area is properly connected to rain barrels or other approved storage devices that provide at least 50 gallons of storage per downspout, or storage devices must be sized to hold the runoff from 50% of the property's roof area during a 1-inch rainfall event.
- The minimum amount of on site water storage required must be completely drained in no less than 24 hours, and no longer than 4 days, after each rainfall event. Longer drainage periods may be acceptable if the storage device is larger than the minimum required storage.
- Stormwater overflows from on site stormwater storage or the draining of on-site storage devices must be directed to appropriate outlets to the storm drainage system or to vegetated areas, and away from neighboring properties, sidewalks, steep slopes, or retaining walls.
- On-site stormwater storage must be completed in such a way that does not provide mosquito breeding grounds, such as making sure rain barrels are covered with a lid or screen that prevents mosquitoes from entering the storage structure.
- Stormwater from the onsite stormwater storage structures must be applied to on-site vegetation and should not discharge from the property. Longer drainage periods may be acceptable if the storage structure is larger than the minimum size required for credit.
- All on-site stormwater storage structures must meet the requirements of the Low Impact Development Manual for Michigan

**Rain Barrel:** A rain barrel is composed of a barrel or drum, a spigot, a vinyl hose, downspout diverter, and an overflow mechanism. A screen opening or downspout diverter can be used to keep debris and insects out. Overflow mechanisms allow the stormwater to either be diverted to the stormwater system or landscaping features when the barrel is full. These overflow mechanisms may include diverters that allow water to flow back into the downspout or flexible pipe that allows overflows to be diverted to landscaped areas.

Saving water not only helps protect the environment it saves money and energy because of the decreased demand for treated tap water.

Rain barrels can be purchased from the Lenawee County Conservation District at the following web page:

**[http://www.lenaweeconservationdistrict.org/2011\\_special\\_items.pdf](http://www.lenaweeconservationdistrict.org/2011_special_items.pdf)**

**Cistern:** Cisterns are similar to rain barrels in function but hold larger quantities of water. They can be installed underground, at ground level, or elevated depending on the site and space constraints of the property. A cistern should be constructed out of reinforced concrete, galvanized steel, or plastic, should have smooth interior surfaces, be watertight, have enclosed lids and be sized according to the installation standards below to manage the proper amount of runoff.

**Installation Standards:** To obtain a Residential Property Credit for on-site stormwater storage the following standards and requirements must be met:

- 75% of the property's roof area is properly connected to rain barrels or other approved storage devices that provide at least 50 gallons of storage per downspout, OR
- Storage structures must be sized to hold the runoff from at least 50% of the property's roof area during a 1-inch rainfall event.

$$V = \frac{1}{2} \times A \times 0.6225 \text{ gallons/feet}^2$$

Where:

V = volume of storage structure in gallons

A = surface area of roof in square feet

0.6225 = conversion factor (gallons per cubic foot per inch of rain)

**Example**

A 500 gallon cistern would provide runoff storage from a 1,600 square foot rooftop for a 1 inch rainfall.

A = 1,600 square feet

$\frac{1}{2} \times 1,600 \times 0.6225 = 498 \text{ gallons}$

**Maintenance Guidelines – Rain Barrel or Cistern**

- Clean your gutters regularly to reduce debris.
- Clear off any screens as necessary.
- Periodically check any hoses associated with the storage structure to clear any debris.
- To winterize, disconnect the downspout and return the downspout to its original configuration. Remove the hoses, mesh screen and store them. Make sure to drain the container, to prevent it from freezing and cracking. If possible, store it upside down, so no water or materials will be able to enter.

- For cisterns, leave the outflow spigot fully open during frost/freezing periods and unhook the drain hose about twice a year to clean out any compacted sediment.

**4.2A3 Vegetated Filter Strips:** Vegetated filter strips are uniform strips of dense turf, meadow grasses, trees or other vegetation with a maximum slope to treat the water quality of small sheet flows from impervious surfaces. In certain circumstances a large lawn may meet the criteria for a vegetated filter strip. To obtain the Residential Property Credit the following criteria must be met:

- 50% of the property's roof area drains to the vegetated filter strip.
- Runoff from downspouts must be dispersed using splash block prior to reaching filter strip.
- The slope of a vegetated filter strip must be less than 5%.
- Filter strips must be fully vegetated and vegetation must be kept healthy.
- Vegetated filter strips must have a minimum length of 50 feet.

#### **Maintenance Guidelines – Vegetated Filter Strips**

- Maintain healthy vegetation along the filter strip. If planted with grass, the height should be at least 3 inches.
- If erosion occurs causing rills and gullies, repair and stabilize.
- Check splash blocks twice a year and make sure they are not broken or deteriorating. Replace as needed.

**4.2A4 Maintenance Requirements:** Stormwater BMPs installed on a property must be maintained to ensure their continued function. The applicant has the legal responsibility to maintain the stormwater BMP. The recertification process will require documentation that the stormwater BMP is continuing to function as originally intended.

#### **4.2A5 Restrictions:**

- The Residential Property Credit applies only to the applicant.
- Credits do not transfer if ownership changes. A new application must be submitted for new owners to continue receiving the Residential Property Credit.
- Residential stormwater BMPs cannot be combined on a property for a credit larger than 50 %.
- The stormwater BMPs must comply with the Low Impact Development Manual for Michigan requirements.

#### **4.2A6 Application and Documentation:**

To receive the Residential Property Credit, the applicant must submit the documentation listed below. A complete application must be submitted for the City of Adrian to begin the review process.

- General Application (Appendix A).
- Residential Property Credit Application (Appendix B).

#### **4.2A7 Recertification:**

The Residential Property Credit is valid for five (5) years. The applicant must submit the recertification application every five years to continue to receive credits towards their stormwater user fee.

Failure to submit recertification information by the required deadline will result in elimination of the credit.

#### **4.2B Non-Residential Stormwater Quantity Credit**

A Stormwater Quantity Credit is available for non-residential applicants who implement stormwater BMPs designed to control stormwater peak flows from to properties whose peak stormwater runoff rate is restricted and/or controlled through on-site structural control facilities such as detention and retention ponds designed, constructed, and maintained according to Lenawee County Stormwater Management requirements. This will reduce the burden on stormwater infrastructure, including streams, storm sewers, combined sewers and other receiving waters, and can reduce flooding frequency and magnitude.

##### **4.2B1 Non-Residential Stormwater Quantity Credit Amounts**

The City of Adrian will provide up to a 75% credit for surfaces that drain through a stormwater BMP that controls the peak discharge rates at which flow of post-development peak runoff is released with respect to the pre-development peak flow:

- Post-development is equal to or less than pre-development peak flow for the 1 year storm flow design: Credit Amount 37.5 %
- Post-development is equal to or less than pre-development peak flow for the 2, 10, and 25-year storm flow design: Credit Amount 52.5 %
- Post-development is equal to or less than pre-development peak flow for the 2, 10, 25, 50, 100 year storm flow design: Credit Amount 67.5 %
- Post-development is equal to or less than pre-development peak flow for the 2, 10, 25, 50, 100 year storm flow design: Stormwater facilities that provide 20% more storage volume than required for the 100-year design storm. This does not include required freeboard above the emergency spillway. Credit Amount 75 %

##### **4.2B2 Application and Documentation:**

To receive the Non-Residential Stormwater Quantity Credit, the applicant must submit the documentation listed below. A complete application must be submitted for the City of Adrian to begin the review process.

- General Application (Appendix A).
- Non-Residential Stormwater Quantity Credit Application (Appendix C).

##### **4.2B3 Recertification:**

The Non-Residential Stormwater Quantity Credit is valid for three (3) years. The applicant must submit the recertification application every three years to continue to receive credits towards their stormwater user fee.

Failure to submit recertification information by the required deadline will result in elimination of the credit.

#### **4.2C Education Credit**

The education credit of 25 % is available to elementary, middle, and high schools (both public and private) recognized by the State of Michigan that provide to its students a regular and continuing program of education concentrating on stewardship of our water resources and minimization of demand on the City of Adrian's stormwater system. This education must be provided annually to at least 25% of the grade levels across the school or school district. An individual school may apply for the credit, or a school district may apply on behalf of all its schools. The rationale behind this credit is that the

information provided by the school will translate into appreciation and stewardship of local water resources and thereby reduce negative impacts (such as pollutant impacts) on local streams, ponds and lakes that can result from uninformed citizens.

#### **4.2C1 Education Credit Requirements:**

The Education Credit is available to elementary, middle and high schools (both public and private) located in the City of Adrian. Suggested education topics include:

- The natural water cycle as well as the urban water cycle, including water and wastewater treatment.
  - The watershed concept, stream formation, and causes of erosion and flooding.
  - Effects of stormwater and surface water pollution on Michigan rivers, streams, and the Great Lakes.
  - Stormwater runoff pollution prevention.
  - Water conservation and its relevance in water-rich Michigan.
  - Watershed management, topography and the geologic history of Michigan.
  - The function and ecosystem services provided by streams, wetlands, and floodplains for flood control and erosion control.
1. Approval of the Education Credit application will result in a 25% credit to the assessed stormwater user fee. The Education Credit will be applied only to the school property(s) where the curriculum is taught. Approved Education Credits can be applied in addition to any other approved credits
  2. Schools that are interested in obtaining the Education Credit must submit a completed application form to the Administrator. The form will require a description of the educational program, list of educational tools used, estimated number of students that will/have receive the education, the length of the educational program and the schedule for providing refresher teacher training courses.

#### **4.2C2 Restrictions:**

- Separate non-educational properties owned by the school or school district, such as administrative, transportation or maintenance facilities are not eligible for the Education Credit, but may apply for any Stormwater Quantity Credit.
- Education Credits may be taken in combination with other Stormwater Quantity Credit.

#### **4.2C3 Application and Documentation:**

To receive the Education Credit, applicants must submit the documentation listed below:

- General Application (Appendix A).
- Education Credit Application (Appendix D).
- Description of educational program, curricula or program materials. This should be 3 pages in length, maximum.
- Grade levels using the curricula (must be at least 25% of all grades at school or school district).
- Estimated number of students reached each school year.

#### **4.2C4 Recertification:**

The Education Credit is valid for five (5) years. The school must submit recertification information every five years to continue to receive the credit.



- The applicant must use the recertification application provided by the City of Adrian.
- Failure to submit the required documentation by April 30th of the fifth year will result in elimination of the credit.

#### **4.2C5 Examples:**

- The North Adrian School District has implemented three different curricula that have been integrated across all the school district's 3rd, 7th, and 9th grades. The school district can apply for a 25% Education Credit for providing this curriculum for 25% of the school district's grade levels. The credit would apply to all school buildings in the district that are used for educational purposes.
- St. Catherine's High School, is a private 4-year high school that has integrated a clean water program into the 9th grade curriculum that is taught to all 9th graders. The school can apply for a 25% Education Credit for providing this curriculum to 25% of the grade levels. The school also has a stormwater detention pond on the school's property, designed to the Lenawee County detention pond standards, to manage the stormwater runoff from the school parking lot. The school can also apply for a Non-Residential Stormwater Quantity Credit for the impervious surface that drains to the stormwater detention pond as long as it provides the required documentation. However, the maximum stormwater user fee credit is limited to 75% of the school's stormwater user fee for the high school property.

#### **4.2D Direct Discharge Credit**

This credit of a maximum of 75% of the stormwater user fee shall be available to eligible customers. An eligible customer shall be the legal owner of a property which is contiguous to the River Raisin, Lake Adrian, or Wolf Creek. Runoff that passes through a public drainageway prior to outfalling to the River Raisin, Lake Adrian, or Wolf Creek is not eligible. Runoff that passes through a private drainageway prior to outfalling to the River Raisin, Lake Adrian, or Wolf Creek is eligible.

It is the responsibility of the stormwater customer to apply for a Direct Discharge credit and to provide the necessary information with the credit application, as described herein. Questions relating to this credit and the credit application should be directed to the Administrator. City staff is not responsible for initiating, performing engineering calculations, or otherwise assisting with the preparation of the Direct Discharge credit application.

A Direct Discharge credit application will only be reviewed if it is filled-out completely. If the Direct Discharge credit application is not administratively complete or been approved, the applicant will receive notice either by email (if provided) or by U.S. mail.

If a Direct Discharge credit application is approved by April 30th, the credit will appear on the next bill.

The Direct Discharge credit need only be applied for once, but will be reviewed if the property is redeveloped or regraded

#### **4.2D1 Examples**

- a) The Miller Printing Company property is contiguous with the River Raisin. The company can demonstrate that 100% of its property area runs off to the River Raisin. Therefore, the company would receive a Direct Discharge credit of 75% of its stormwater user fee. (75%)
- b) The Acme Storage Company's property is contiguous with the River Raisin. The company can demonstrate that 70% of its property runs off to the River Raisin. Therefore, the company would receive a Direct Discharge credit of 70% of 75% of its stormwater user fee. (52.5%)

- c) The Acme Storage Company's property is contiguous to the River Raisin and previously qualified for a Direct Discharge credit of 70% of 75% of its stormwater user fee. The company regraded the site so that 100% of its property runs off to the River Raisin. Therefore, its Direct Discharge credit would be revised to receive a credit of 100% of 75% of its stormwater user fee. (75%)

## **5.0 General Credit Application Procedures**

Applications must be submitted with all required documentation to the City of Adrian as described on each application.

When an application is received, the Administrator will conduct an administrative completeness review of all submitted materials. If the application is not complete, the applicant will be contacted and requested to provide any additional information necessary to complete the application.

Following the receipt of a complete application, the Administrator will provide a complete review and the applicant will be notified in writing when an application is approved or denied.

If a credit application is approved by April 30th, the credit will be applied to that upcoming bill, otherwise, the credit will appear on the next bill.

In cases of denial, the reasons for denial will be included.

The Administrator's determination to grant, deny, or revoke stormwater user fee credits may be appealed in accordance with the City of Adrian Stormwater Utility Ordinance, Ordinance Number 74, as amended.

## **6.0 Glossary**

The following definitions shall apply in the use of this Stormwater User Fee Credit Manual. All definitions used in the City of Adrian, Michigan Stormwater Utility Ordinance, Ordinance No. 74, as amended, are applicable as well to this Stormwater User Fee Credit Manual. Words used in the singular shall include the plural, and the plural, the singular; words used in the present tense shall include the future tense. The word "shall" is mandatory and not discretionary. The word "may" is permissive. Words not defined herein shall be construed to have the meaning given by common and ordinary use as defined in the latest edition of Webster's Dictionary.

*Administrator* is the City Engineer or such other person as the City Administrator may designate.

*Appeal* is the process of filing a dispute with the user fee determination, adjustment or credit as recognized by the City.

*Applicant* is any person, or a duly designated representative applying for a stormwater user fee credit, storm water discharge permit or storm water connection.

*Best Management Practices or BMPs* shall mean a schedule of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the discharge of pollutants to the waters of the State.

*City* shall mean the City of Adrian, Michigan and its authorized agents.

*Commission* shall mean the City Commission of the City of Adrian, Michigan.

*Credit* shall mean a conditional reduction in the amount of a stormwater user fee charge to a property based on the provision and continuing presence of, use, operation, and maintenance of practices that the City of Adrian does not own, maintain or operate; or based on the continuing provision of activities that may reasonably reduce or mitigate the City's cost of providing for the City's stormwater management program.

*Detention* shall mean the prevention of, or to prevent, the discharge, directly or indirectly, of a given volume of stormwater runoff into the stormwater system by providing temporary on-site storage.

*Discharge* shall mean the flow of water from a project, site, aquifer, drainage basin, or other drainage facility.

*Easement* shall mean a grant by a property owner for a specified use of all or a specified portion of land to a person or the public at large.

*Erosion* shall mean the wearing or washing away of soil by the action of water.

*Freeboard* shall mean the space from the top of an embankment to the highest water elevation expected for the largest design storm stored. The space is often required as a safety margin in a pond or detention basin.

*Frequency Year Storm* shall mean a rainfall event expressed as an exceedance probability with a specified chance of being equaled or exceeded in any given year, as follows:

- One Year.....100 percent
- Two Year..... 50 percent
- Ten Year.....10 percent
- Twenty-Five Year.... 4 percent
- Fifty Year..... 2 percent
- One-Hundred Year... 1 percent

*Impervious area or surface* shall mean any surface that is compacted or covered with material that resists or impedes permeation by water, including but not limited to, most conventionally graded streets, rooftops, parking lots, sidewalks, patios and driveways, and any other oiled, graveled, graded, or compacted surfaces.

*Intensity of Development (ID)* of a property shall be the impervious area of the property expressed as a percentage of the total area of the property. Each property, with the exception of residential properties charged a flat rate, will be placed within an ID classification based on the property's ID.

*Intensity of Development Classification (ID Classification)* shall mean the following classifications which shall be used in a formula to determine the stormwater user fee for the property, with the exception of residential properties charged a flat rate (consisting of detached single-family homes up to and including four units):

1. *Undeveloped.* Real property which is undeveloped and unaltered by buildings, roads, impervious surfaces or other physical improvements which change the hydrology of the property from its natural state.
2. *Light development.* Developed real property, which has impervious surfaces of less than 20 percent of the total square footage area of the property.

3. *Moderate development.* Developed real property, which has impervious surfaces of 20 to 40 percent of the total square footage area of the property.
4. *Heavy development.* Developed real property, which has impervious surfaces of 40 to 70 percent of the total square footage area of the property.
5. *Very heavy development.* Developed real property, which has impervious surfaces of more than 70 percent of the total square footage area of the property.

*MDEQ* shall mean the Michigan Department of Environmental Quality

*Operation and Maintenance* shall mean any component of a stormwater system requiring expenditure for materials, labor, utilities and other items for the management and uninterrupted operation of the stormwater system in a manner for which the stormwater system was designed and constructed.

*Operation and Maintenance Costs* shall mean all costs, direct and indirect, of operation and maintenance of a stormwater system.

*Owner* shall mean any person, firm, partnership, association, joint venture, corporation or other entity or combination of entities who alone, jointly, or severally with others hold(s) legal or equitable title to any real property. The term “owner” shall also include heirs, successors, and assigns.

*Parcel* shall mean a tract, or contiguous tracts, of land in the possession of, owned by, or recorded as property of the same claimant person.

*Person* shall mean any individual, association, organization, partnership, firm, public or private corporation or public agency.

*Pervious area or surface* is all land area that is not impervious.

*Professional Engineer* shall mean a professional engineer who is licensed by the State of Michigan and skilled in the practice of civil engineering and the engineer of record for the project under consideration.

*Property* shall mean any land within the boundary of the City of Adrian, both publicly and privately owned, including public and private rights of way.

*Retention* shall mean the prevention of, or to prevent, the discharge, directly or indirectly, of any stormwater volume into the storm water system.

*Storm event* shall mean a storm of specific duration, intensity, and frequency.

*Stormwater* means stormwater runoff, snowmelt runoff, footing drain discharges, surface runoff and drainage.

*Stormwater design standards* shall mean those standards included within the Lenawee County Stormwater Design Standards, and such other standards that may be adopted by the City from time to time.

*Stormwater management* shall mean one or more of the following:

- The quantitative control achieved by the stormwater system of the increased volume and rate of surface runoff caused by alterations to the land.
- The qualitative control achieved by the stormwater system, pollution prevention activities, and ordinances to reduce, eliminate or treat pollutants that might otherwise be carried by stormwater.
- Public education, information, and outreach programs designed to educate and inform the public on the potential impacts of stormwater.

*Stormwater management plan* shall mean the written documents and plans that contain the following elements which shall be used to guide the stormwater management program:

- May, 1992 City of Adrian, Michigan Stormwater Utility Feasibility Study prepared by McNamee, Porter & Seeley, Inc. (now known as Tetra Tech).
- 2006 Westside Storm Sewer Capacity Study prepared by Tetra Tech
- Geographic limits of the City of Adrian, Michigan.
- Stormwater management services to be provided.
- The planning period covered by the stormwater management plan.
- River Raisin Watershed Management Plan
- Total Maximum Daily Loads promulgated by the federal or state government
- Rules of the Lenawee County Drain Commissioner
- Projected operation and maintenance and capital expenses for each year of the stormwater management plan planning period including steps taken to reduce expenses.
- Documentation of an analysis undertaken to evaluate the comparative cost-effectiveness of stormwater management alternatives.
- Projected residential properties.
- Projected non-residential properties, including total property area and ID classification.
- The method of calculating any stormwater user fees and stormwater system development charges, if used, proportionate to the necessary cost of providing the necessary level of service of stormwater management services.
- The process and method by which the City of Adrian will determine which properties will be subject to any stormwater user fee for use of the stormwater system owned and operated by the City of Adrian.
- A description of the components of the stormwater system owned and operated by the City of Adrian.
- A description of how credits to reduce stormwater user fees will be applied and calculated.

*Stormwater management program* shall mean one or more aspects of stormwater management undertaken for the purpose of complying with applicable federal and state law and regulation or the protection of the public health, safety, and welfare related to storm water runoff.

*Stormwater runoff* shall mean flow on the surface of the ground, resulting from precipitation and

snowmelt that does not infiltrate into the soil, including material dissolved or suspended in it.

*Stormwater system* shall mean the roads, streets, catch basins, curbs, gutters, ditches, storm sewers and appurtenant features, lakes, ponds, channels, swales, storm drains, canals, creeks, catch basins, streams, gulches, gullies, flumes, culverts, siphons, retention or detention basins, dams, floodwalls, levees, pumping stations, and other like facilities, and natural watercourses and features located within the geographic limits of the City which are designed or used for collecting, storing, treating or conveying storm water or through which stormwater is collected, stored, treated or conveyed, or any other physical means by which stormwater management is achieved.

*Stormwater user fee* shall mean the fee charged to properties within the City of Adrian calculated proportionate to the necessary cost of providing stormwater system management services to the users of the City's stormwater system.

*Structure* shall mean anything constructed or installed with a fixed location on or in the ground.

*Surface Waters* shall mean any receiving waters existing on the surface of the ground, including but not limited to; brooks, streams, rivers, wetlands, ponds, or lakes.

*Undeveloped* shall mean the condition of a property unaltered by construction or the addition of impervious surface.

*User shall mean* a firm, person or property that directly or indirectly contributes stormwater to the stormwater system.

*Water quality* shall mean those characteristics that relate to the physical, chemical, biological or radiological integrity of water.

*Water quantity* shall mean those characteristics that relate to the rate and volume of the stormwater runoff to downstream areas.

*Watershed* shall mean an extent of land where stormwater runoff drains downhill into a body of water, such as a river, lake, reservoir, estuary, or wetland. The watershed includes both the streams and rivers that convey the water as well as the land surfaces from which water drains into those channels, and is separated from adjacent watersheds by a topographic divide.

**APPENDIX A**  
**General Application**

CITY OF ADRIAN, MICHIGAN  
STORMWATER USER FEE CREDIT  
GENERAL APPLICATION

1. Applicant Name:
2. Contact Name (if different than applicant):
3. Parcel Identification Number (if known):
4. Water/Sewer/Stormwater Account Number (if known):
5. Property Address: Street Number: Zip code:
6. Mailing Address (if different than property address): Street Number: City: Zip code:
7. Phone Number:
8. FAX Number:
9. Email Address:
10. Credits Applying For: <ul style="list-style-type: none"><li><input type="radio"/> Residential Property Credit (50 % Flat Rate)</li><li><input type="radio"/> Storm Water Quantity Credit (37.5 to 75 %)</li><li><input type="radio"/> Education Credit (25 % Schools Only)</li><li><input type="radio"/> Direct Discharge Credit (Maximum 75 %)</li></ul>
11. Applicant/Contact Signature: <i>I hereby request that the City of Adrian review this application for a stormwater user fee credit. I further authorize City staff to inspect the property identified in this application, if necessary, for the purpose of assessment for a possible credit. I certify that I have authority to make such a request and grant such authority for this property. The attached information is true and correct to the best of my knowledge and belief. I agree to provide corrected information to the City of Adrian should there be any change in the information provided herein.</i>  Applicant Signature: _____ Applicant Name: _____ Title: _____ Date: _____

Email form to: [kbauer@ci.adrian.mi.us](mailto:kbauer@ci.adrian.mi.us) <mailto:OR>

Mail to: City of Adrian, Engineering Department, 135 East Maumee Street, Adrian, MI 49221  
**For Questions Regarding the Credit Application, Contact:** Phone: Kristin Bauer, P.E., City Engineer, 517-264-4894



## **APPENDIX B**

### **Stormwater User Fee Residential Property Credit Application**

CITY OF ADRIAN, MICHIGAN  
STORMWATER USER FEE  
RESIDENTIAL PROPERTY CREDIT APPLICATION

1. Applicant Name:

2. Credit Applying For:

○ Rain Garden

○ # of downspouts draining to rain garden \_\_\_\_\_ (if applicable)

○ Design according to checklist in Low Impact Development Manual for Michigan

○ On-Site Stormwater Storage:

○ Rain Barrels

○ Cistern

# of downspouts draining to on-site storage \_\_\_\_\_

Volume of on-site storage \_\_\_\_\_ gallons

○ For cistern, calculations from the City of Adrian Stormwater User Fee Credit Manual

○ Vegetated Filter Strips

# of downspouts draining to vegetated filter strip

Slope of yard \_\_\_\_\_%

Length of vegetated strip \_\_\_\_\_ feet

3. Photograph or sketch of Rain Garden, Rain Barrels, Cistern or Vegetated Filter Strip as installed is attached.

## **APPENDIX C**

### **Stormwater User Fee Non-Residential Quantity Credit Application**

CITY OF ADRIAN, MICHIGAN  
STORMWATER USER FEE  
NON-RESIDENTIAL QUANTITY CREDIT APPLICATION

1. Applicant Name:
2. Stormwater Structure Description:
3. Credit Applying for: <ul style="list-style-type: none"> <li>• Post-development is equal to or less than pre-development peak flow for the 1 year storm flow design: Credit Amount 37.5 %</li> <li>• Post-development is equal to or less than pre-development peak flow for the 2, 10, and 25-year storm flow design: Credit Amount 52.5 %</li> <li>• Post-development is equal to or less than pre-development peak flow for the 2, 10, 25, 50, 100 year storm flow design: Credit Amount 67.5 %</li> <li>• Post-development is equal to or less than pre-development peak flow for the 2, 10, 25, 50, 100 year storm flow design: Storm water facilities that provide 20% more storage volume than required for the 100-year design storm. This does not include required freeboard above the emergency spillway. Credit Amount 75 %</li> </ul>
4. Required Documents Attached: <ul style="list-style-type: none"> <li>_____ Submitted topographic map(s) or site plan(s) showing project location, scale, contours, north arrow, impervious and pervious areas and constructed stormwater system(s) including the components for which a credit is requested.</li> <li>_____ Drainage area map, including off-site areas draining through components for which a credit is requested.</li> <li>_____ Size, location and labeling of all stormwater structures.</li> <li>_____ Construction details of stormwater components.</li> <li>_____ Final recorded document (deed description or plat) dedicating storm drainage and access easements (if applicable).</li> <li>_____ Inspection and Operation, Maintenance and Repair Plan</li> <li>_____ Legal agreement(s) for operation and maintenance for applications that include multiple account holders (if necessary).</li> <li>_____ A recent inspection report (less than one year from application date) by an engineer, architect or landscape architect certifying that the system is properly designed and is being maintained.</li> <li>_____ Calculations using industry-standard hydrologic/hydraulic software for pre-and post-development conditions, including input and output data.</li> </ul>
5. Signature: <i>I hereby certify that to the best of my knowledge the stormwater system for which a stormwater user fee quantity credit is requested has been constructed in a manner to potentially meet one or more of the stormwater user fee quantity credit criteria, is operating as designed and is being properly maintained. I further certify that to the best of my knowledge the calculations, technical details and information provided accurately reflect the condition of this stormwater system at the time of my inspection.</i>
Engineer, Architect or Landscape Architect Signature: _____ Name: _____ Michigan License Number: _____ Company: _____ Address: _____ Company Phone: _____ Company FAX: _____ Date: _____

## **APPENDIX D**

### **Stormwater User Fee Education Credit Application**

CITY OF ADRIAN, MICHIGAN  
STORMWATER USER FEE  
EDUCATION CREDIT APPLICATION

1. School or School District Name:
2. List Schools That Apply:
3. Program Information: <ul style="list-style-type: none"><li>○ Grade Levels Offered at School/School District: _____</li><li>○ Grade Levels Using Curriculum: _____</li><li>○ Estimated Number of Students Reached Each Year: _____</li><li>○ Estimated Number of Students at Facility: _____</li></ul>
4. Description of educational program, curricula and/or program materials attached.
5. Proof of coursework:
6. Principal Signature: <i>I hereby certify that to the best of my knowledge the stormwater education program for which a stormwater user fee education credit is requested meets the stormwater user fee education</i>  Principal Signature: _____ Name: _____ School: _____ Address: _____ Phone: _____ FAX: _____  Date: _____

## **APPENDIX E**

### **Stormwater User Fee Direct Discharge Credit Application**

CITY OF ADRIAN, MICHIGAN  
STORMWATER USER FEE  
DIRECT DISCHARGE CREDIT APPLICATION

1. Applicant Name:
2. A maximum credit of 75 % of the stormwater user fee is available to properties that are contiguous to the River Raisin, Lake Adrian, or Wolf Creek. Runoff that passes through a public drainageway prior to outfalling to the River Raisin, Lake Adrian, or Wolf Creek is not eligible. Runoff that passes through a private drainageway prior to outfalling to the River Raisin, Lake Adrian, or Wolf Creek is eligible.
3. The area of the property that discharges to the River Raisin, Lake Adrian, or Wolf Creek divided by the total area of the property shall determine the percentage reduction applied to the stormwater user fee
4. Required Documents Attached: <div style="margin-left: 20px;"> <p>_____ Submitted topographic map(s) or site plan(s) showing property location, scale, contours, north arrow, and impervious and pervious areas.</p> <p>_____ Drainage map showing those impervious and pervious areas that drain to the River Raisin, Lake Adrian, or Wolf Creek.</p> <p>_____ Watershed breaks across the property.</p> <p>_____ Construction details of stormwater components, including location and elevations of natural and man-made features.</p> <p>_____ Sufficient topographic data or elevations to verify general drainage patterns across the property.</p> </div>
5. Signature: <i>I hereby certify that to the best of my knowledge the property for which a Direct Discharge credit for the storm water user fee is requested is contiguous to the River Raisin, Lake Adrian, or Wolf Creek. I further certify that to the best of my knowledge the calculations, technical details and information provided accurately reflect the drainage patterns of this property.</i>
Engineer, Architect or Landscape Architect Signature: _____ Name: _____ Michigan License Number: _____ Company: _____ Address: _____ Company Phone: _____ Company FAX: _____ Date: _____